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ABSTRACT

This paper describes the Virginia Satellite Educational Network (VSEN) and reports the results of an assessment of the program. The purpose of the VSEN, which was developed after the 1988 approval of the Governor's Educational Technology Initiative, is to meet the educational needs of Virginia students, especially in small and rural areas, and to bridge any educational disparities between localities. The paper begins by describing VSEN courses as "live," 50-minute, one-way video, two-way audio interactive presentations that include credit courses for students, staff development programs, and special course offerings. General guidelines, licensure standards, and guidelines for instructors and support staff are also provided. It then reports on a survey of all high school and middle school principals and counselors in Virginia which was conducted in 1991-92 to rate VSEN distance learning classes and other major satellite course providers. Responses on the 452 questionnaires returned are analyzed, and the results are reported. These results provide information on which distance learning providers are used; the frequency and nature of technical difficulties; the kinds of personnel involved in receiving programs; and the geographical distribution of local participants. Discussions of facilitator problems and their training needs and the strengths of distance learning conclude this report. (KRN)

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# Virginia Satellite Educational Network and Satellite Education Assessment Results

**by Anna Lee Gibson**
**VSEN Instructor**

Education stands on the threshold of a "brave new world." Just as the little, red schoolhouse was forced to evolve, the standard school system is now in the throes of an unparalleled metamorphosis. In these changing times, the challenge for each school system is to offer tomorrow's education for students today.

The age-old excuses, "we don't have a teacher for that course" and "we can't offer a course for two students," are no longer valid. A quality education is available for every student. Your school may be in a "holler," on a beach, or deep in an inner city; no matter where you are located, quality instruction is now available.

In a decade when the by-words of education are "reductions" and "cutbacks," there are ways of offering additional, high quality courses with little expense. At this point are you saying, "Only in your imagination"? Well, the imagination of the Virginia Department of Education is excellent. In fact, their imagination is so good that other states are now clamoring to join Virginia's satellite education program.

Virginia Satellite Educational Network (VSEN) was developed in direct response to the 1988 Virginia Assembly's approval of the Governor's Educational Technology Initiative. The purpose of the VSEN is to meet the educational needs of Virginia students (especially those in small and rural areas) and to bridge possible educational disparities between localities.

Virginia Satellite Educational Network's Distance Learning Electronic Classroom is geared to provide credit courses to students within systems: [1] where a qualified teacher is not available, [2] when the number of qualifying students is too small to justify employment of a full time instructor, and/or [3] to simply add another section of a course for more flexible scheduling for students.

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VSEN courses are "live," 50 minute, one-way video, two-way audio, interactive presentations.

As specified by the Governor's Educational Technology Initiative, the Virginia Satellite Educational Network also provides recertification courses, staff development inservice programming, and professional teleconferencing for teachers and administrators via satellite.

**General Guidelines**

I. Courses and programs offered for credit shall meet or exceed the discipline specified by the Virginia Standards of Learning.

II. Participating localities will adjust schedules to allow students to interact live with the instructor and fellow students from other satellite classrooms during the televised time period. (The exceptions that warrant delayed viewing must be approved by the division superintendent and the Department of Education.)

III. Starting dates for satellite classrooms must be within seven school days of Labor Day. (Regional variables will be considered; however, flexibility must be exercised by both the originating studio and the satellite classroom.)

IV. The presentations broadcasted by VSEN and received by satellite classrooms will follow these priorities: (a) to receive and participate in Virginia Satellite Educational Network course offerings; (b) to receive and participate in VSEN inservice and staff development training programs; (c) to receive national teleconferences, especially those concerned with educational issues; (d) to participate in educational programs developed by or

sanctioned by the VSEN; (e) to meet other local or community needs.

**Licensure Standards**

All VSEN instructors shall meet the criteria specified by the 1986 *Virginia Certification Regulations for Teachers*. Kindergarten through 12th grade instructors of distance learning credit courses offered by the Satellite Educational Resources Consortium (SERC) and other producers in other states must have an active teaching license and meet the standards set forth in the 1986 *Virginia Certification Regulations for Teachers*.

**Instructors and Support Staff**

I. Electronic classroom/distance learning courses shall be taught by experienced, licensed instructors. Licensure standards will be granted by the Local Educational System through the Virginia Board of Education.

II. Each school division shall have a division contact person to supervise distance learning. Each participating school shall have a school contact person.

III. Each distance learning/electronic classroom course shall have a facilitator who will be in charge of satellite classroom management.

IV. Electronic classroom/distance learning instructors, facilitators, and support staff shall receive inservice training and/or assistance in originating courses, classroom management, and technical procedures.

**Courses and Special Offerings:**

Now with a twist of a dial, new courses can appear in any classroom setting. No longer is the traditional classroom the only means of educating students. This "brave new world" of learning has been nurtured and allowed to flourish in Virginia.

As early as 1984, the Virginia Satellite Educational Network (VSEN) began broadcasting classes throughout the state. Today the VSEN has grown to include five broadcast sites with a list of fourteen classes, as well as many education specials and electronic field trips.

The Virginia Satellite Educational Network offers these courses for the 1992-1993 and 1993-94 school terms: Latin I (2 time slots), Latin II, Latin III, Introduction to Japanese, Japanese I (2 time slots), Japanese II, AP English, AP Calculus (2 time slots), AP Computer Science, Basic Algebra, and Honors Geometry. In addition to these regularly scheduled classes, VSEN offers pilot foreign languages for elementary students and pilot elementary science seminars, as well as a series of Technology for Educators and a pilot Science Program for elementary teachers. VSEN also broadcasts regular student forums in which students, educators, politicians, and other newsmakers debate such topics as Dropout Prevention.

Perhaps your system would like to offer three years of Latin and Japanese. You may even dream of offering elementary students special classes in foreign languages. In Virginia, all of these dreams are realities.

Your system may even fantasize about offering an advanced English course with college level instructors who delve into philosophy and sociology while studying classic literature. This fantasy is also a reality in VSEN's Advanced Placement English.

Teachers and administrators also benefit from the dreams which pioneered VSEN. Inservice broadcasts and recertification courses are presented via satellite; therefore, school systems can save thousands of dollars in travel expenses and hundreds of man-hours, which would be lost in shuffling back and forth to various locations. Yet, it is not only the school systems which benefit from satellite education; individuals can enjoy the advantages of this new technology. Teachers and administrators, who may find it impossible to travel great distances to complete advanced degrees, are able to enroll in courses through the satellite equipment within their schools.

Have you ever wished that by twitching your nose you could zap students to the beach, or to a museum, or to talk with a famous person? Well in satellite education, students can go on daily excursions into new realms.

For example, students in southwestern Virginia were treated to an electronic field trip to the ocean by students from Virginia Beach. Students were allowed an intimate, armchair view, and they were encouraged to interact through a two-way phone bridge with the group presenting the special. In return, students from eastern Virginia asked for an electronic field trip to visit a coal mine in the southwestern part of the state. In a decade when school budgets are being squeezed, traveling electronically may be the only reasonable alternative available.

In addition to travel specials, famous individuals--including artists, politicians, philosophers, and mathematicians--also appear in satellite classes. More importantly, through the two-way audio phone system, students can speak directly to resource persons while they are on the air. In fact, students from any locality can suddenly find themselves in the midst of one-on-one discussions with newsmakers.

Yet, the possibilities for discussion and exchange of ideas are not in any way limited to the rich or famous. Students quickly become involved in the lessons presented in the courses, and something unimagined occurs. Students from different localities begin to discuss concepts. Now there it is! Something you can't buy, something that wasn't expected, the unplanned for commodity in the venture; suddenly rural students, inner city students, and suburban students are meeting together in one extended classroom. The barriers among students fade as they share the adventure of learning. The television instructors become real individuals with whom students can talk, and fellow classmates from hundreds of miles away become as familiar as the students at the local bus stop.

Satellite education may sound as cold and distant as the starship Enterprise, but in reality the sweet successes of the program seem more like a fresh slice of homemade apple pie.

**Part II:**

**1991-92 Assessment of Distance Learning Providers:**

Historians may call this decade the era of satellite education. Those involved in distance learning may be lauded or cursed for the successes or failures of the programs pioneered today. The following question haunts many distance learning providers: "How successful is Distance Learning?" To answer this question and many others,

Virginia Satellite Education Network decided that it was time to ask those directly involved with distance learning. Therefore, VSEN devised an assessment tool to rate VSEN distance learning classes, as well as the other major satellite course providers. VSEN polled all Virginia high school and middle school principals and counselors, and compiled the results from **452** surveys.

The VSEN assessment for distance learning gives many distance learning providers a reason to celebrate. Eighty-three percent of those involved in distance learning perceive the classes as a positive learning experience, while only 10% of those polled believe that satellite classes are a negative learning experience.

The distance learning providers within Virginia schools, as certified by the assessment, are the following: VSEN 82%, SERC 7%, STEP 2%, TI-IN 2%, and Whittle 50%. The Whittle program, with its offer of equipment and programming, seems to have captured the attention of a large number of Virginia schools (50%). However, 82% of Virginia

schools utilize VSEN classes, with STEP, SERC, and TI-IN trailing in the number of schools enrolled in programs.

While 14% of those polled had never experienced any technical difficulties with satellite classes, a large number of satellite schools (63%) have experienced technical difficulties with distance learning providers; however, the occurrences of these technical difficulties were small in number (1-5 times per year). Often poor reception was blamed on bad weather (30%) and faulty equipment (27%). Fourteen percent of those polled believed poor reception was due to human error.

What piece of equipment is the greatest headache for satellite schools? Fifty-nine percent of the polled schools experienced difficulties with satellite dishes. Which piece of equipment presented the least problem? Only 9% of the schools experienced problems with the video cassette recorder; this was actually fewer problems than the polled schools encountered with the telephone service (10%).

If you are wondering who is facilitating distance learning classes, the VSEN assessment suggests that 45% are teachers and another 42% are librarians; only 6% of the facilitators are administrators. The next area of concern for many distance learning providers centers on facilitator training; 60% of the polled schools report that facilitators have received training with the equipment and 55% have received training on their duties and responsibilities. Those involved in distance learning must be concerned about the 40% who have not

received any training for coping with the equipment and the 45% who have not been instructed on the duties and responsibilities of facilitating a satellite education course.

Are facilitators happy with their new duties? Forty-seven percent of facilitators combine facilitating with other duties, which could lead to some frustration. Perhaps the more contented facilitators are the 24% who are allotted a specific period for monitoring. (Facilitating while performing other duties was the number one problem identified in a separate assessment directed to VSEN facilitators.)

How can some of the problems in facilitating be solved? Sixty-one percent of the polled principals and counselors believe that regularly scheduled conferences between facilitators and instructors would be helpful.

What type of school is interested in participating in satellite education? If the percentages for the country are the same as in Virginia, then it is very difficult to discern the school most apt to enroll in distance learning. The sparsely populated and agrarian areas combine to form 54% of the enrolled schools; however, these schools are followed closely by the more densely populated areas which provide 42% of those enrolled in satellite classes.

Eighty percent of those polled believe the audio and video reception is excellent to average within VSEN programming. Seventeen percent of VSEN schools believe that both audio and video reception are perfect. Eight percent of those polled believed that VSEN was better

than the other distance learning providers, with another 43% suggesting that VSEN was similar in the quality of presentations. Those polled give VSEN excellent marks on the technical quality of their product.

The VSEN assessment also verifies that most schools are not taking advantage of the satellite equipment. Sixty-nine percent of the polled schools do not use the satellite equipment for teacher credit courses.

The additional courses that schools are interested in receiving from distance learning are AP History (32%), Music Appreciation (20%), Art Appreciation (19%), and Physics (15%).

The VSEN assessment clearly defines the problem areas in satellite education. The problem of technical difficulties centers on the absence of a comprehensive program for facilitator inservice with the equipment used in satellite education. Another technical concern suggested by the assessment is the lack of knowledgeable individuals to take a facilitator through the step-by-step procedures to correct a problem. Within the instructional area, those polled cite the following as weaknesses: training of facilitators, facilitators who monitor classes while performing other duties, communication among instructors and facilitators, lack of interest among some administrators, and insufficient information concerning course offerings.

The strengths of distance learning include: availability to schools, quality of instruction, academic success of students, diversity of students, variety in courses, and the positive perception of satellite education. Technically speaking, the greatest surprise in this survey is that 91% of those polled can operate a VCR with great success. Other technical strengths include: quality of broadcasts, accessibility of teachers through use of 800 numbers, and use of the fax communications.

The VSEN assessment clearly indicates that distance learning is alive and well. The task now presented to distance learning providers is to build on the strengths and "heal thy afflictions."